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Water Supply Outlook For Idaho



**SOIL CONSERVATION SERVICE
U.S. DEPARTMENT OF AGRICULTURE**

Cooperating with

IDAHO SOIL CONSERVATION DISTRICTS
IDAHO DEPARTMENT OF WATER RESOURCES
NOAA, NATIONAL WEATHER SERVICE

AS OF
Mar. 1, 1983

TO RECIPIENTS OF WATER SUPPLY OUTLOOK REPORTS:

Most of the usable water in western states originates as mountain snowfall. This snowfall accumulates during the winter and spring, several months before the snow melts and appears as streamflow. Since the runoff from precipitation as snow is delayed, estimates of snowmelt runoff can be made well in advance of its occurrence. Streamflow forecasts published in this report are based principally on measurement of the water equivalent of the mountain snowpack.

Forecasts become more accurate as more of the data affecting runoff are measured. All forecasts assume that climatic factors during the remainder of the snow accumulation and melt season will interact with a resultant average effect on runoff. Early season forecasts are therefore subject to a greater change than those made on later dates.

The snow course measurement is obtained by sampling snow depth and water equivalent at surveyed and marked locations in mountain areas. A total of about ten samples are taken at each location. The average of these are reported as snow depth and water equivalent. These measurements are repeated in the same location near the same dates each year.

Snow surveys are made monthly or semi-monthly from January 1 through June 1 in most states. There are about 1900 snow courses in Western United States and in the Columbia Basin in British Columbia. Networks of automatic snow water equivalent and related data sensing devices, along with radio telemetry are expanding and will provide a continuous record of snow water and other parameters at key locations.

Detailed data on snow course and soil moisture measurements are presented in state and local reports. Other data on reservoir storage, summaries of precipitation, current streamflow, and soil moisture conditions at valley elevations are also included. The report for Western United States presents a broad picture of water supply outlook conditions, including selected streamflow forecasts, summary of snow accumulation to date, and storage in larger reservoirs.

Snow survey and soil moisture data for the period of record are published by the Soil Conservation Service by states about every five years. Data for the current year is summarized in a West-wide basic data summary and published about October 1 of each year.

COVER PHOTO: Fresh powder snow on Elephant Mountain, near the West Fork of Hyalite Creek in Montana.

PUBLISHED BY SOIL CONSERVATION SERVICE

The Soil Conservation Service publishes reports following the principal snow survey dates from January 1 through June 1 in cooperation with state water administrators, agricultural experiment stations and others. Copies of the reports for Western United States and all state reports may be obtained from Soil Conservation Service, West Technical Service Center, Room 510, 511 N.W. Broadway, Portland, Oregon 97209.

Copies of state and local reports may also be obtained from state offices of the Soil Conservation Service in the following states:

STATE	ADDRESS
Alaska	Room 129, 2221 East Northern Lights Blvd., Anchorage, Alaska 99504
Arizona	Room 3008, Federal Building, 230 N. First Ave., Phoenix, Arizona 85025
Colorado (N. Mex.)	P. O. Box 17107, Denver, Colorado 80217
Idaho	Room 345, 304 N. 8th. St., Boise, Idaho 83702
Montana	P. O. Box 98, Bozeman, Montana 59715
Nevada	P. O. Box 4850, Reno, Nevada 89505
Oregon	1220 S. W. Third Ave., Portland, Oregon 97204
Utah	4420 Federal Bldg., 125 South State St., Salt Lake City, Utah 84138
Washington	360 U. S. Court House, Spokane, Washington 99201
Wyoming	P. O. Box 2440, Casper, Wyoming 82602

PUBLISHED BY OTHER AGENCIES

Water Supply Outlook reports prepared by other agencies include a report for California by the Snow Surveys Branch, California Department of Water Resources, P.O. Box 388, Sacramento, California 95802 --- for British Columbia by the Ministry of the Environment, Water Investigations Branch, Parliament Buildings, Victoria, British Columbia V8V 1X5 --- for Yukon Territory by the Department of Indian and Northern Affairs, Northern Operations Branch, 200 Range Road, Whitehorse, Yukon Territory Y1A 3V1 --- and for Alberta, Saskatchewan, and N.W.T. by the Water Survey of Canada, Inland Waters Branch, 110-12 Avenue S.W., Calgary, Alberta T3C 1A6.



WATER SUPPLY OUTLOOK FOR IDAHO

and
FEDERAL - STATE - PRIVATE COOPERATIVE SNOW SURVEYS

Issued by

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WATER SUPPLY OUTLOOK for IDAHO



GENERAL STATEMENT FOR MARCH 1, 1983

The water supply outlook for the 1983 season is good to excellent for the Snake River and its tributaries upstream from the Salmon River; fair for the Clearwater and Palouse drainages, and good for the Spokane and Priest River drainages in Northern Idaho. Forecasts for April through September runoff range from a low of 90 percent on the Clearwater drainage in North Idaho to a high of 157 percent of average on the Little Wood drainage in South Central Idaho. The Owyhee Reservoir inflow in Eastern Oregon is forecast at 174 percent of normal.

Currently, snowpack conditions range from a low of 78 percent of average on the Clearwater drainage to a high of 175 percent of average on the Owyhee drainage with most basins on the Snake drainage ranging from 91 percent to 153 percent of normal. The Bear River basin in the southeastern part of the state is at 79 percent of normal.

The range of valley precipitation for stations in Idaho was from 48 percent of average at Grace to 207 percent of average at Ketchum with the state as a whole standing at 133 percent of average. For the water year, the Gem State has had 122 percent of normal precipitation. Temperatures remained mild again this month with averages from 5° F. to 8° F. above normal.

Reservoir carryover storages remain near to well above normal in most reservoirs and soil moisture conditions continue to be good to excellent throughout the state.

VALLEY PRECIPITATION 1/
 Division Averages and Departures
 In Inches

DRAINAGE DIVISIONS	Winter Feb. 1983		Fall - Winter Nov. 82 - Feb. 1983	
	Observed	Departure <u>2/</u>	Observed	Departure <u>2/</u>
Kootenai, Canada & U.S.	2.06	+ .11	10.80	- .85
Flathead	1.13	- .61	7.65	- 1.55
Clark Fork	1.16	- .11	5.58	- 1.20
Pend Oreille-Spokane	3.60	+ .76	15.48	+ .46
Upper Snake	2.01	+ .16	8.44	- .15
Snake River Plain	1.25	+ .47	4.41	+ .11
Salmon-Payette-Boise	2.95	+ 1.20	11.50	+ .44
Clearwater	2.97	+ .10	11.62	- 3.30
Owyhee-Malheur	1.20	+ .35	5.58	+ .76

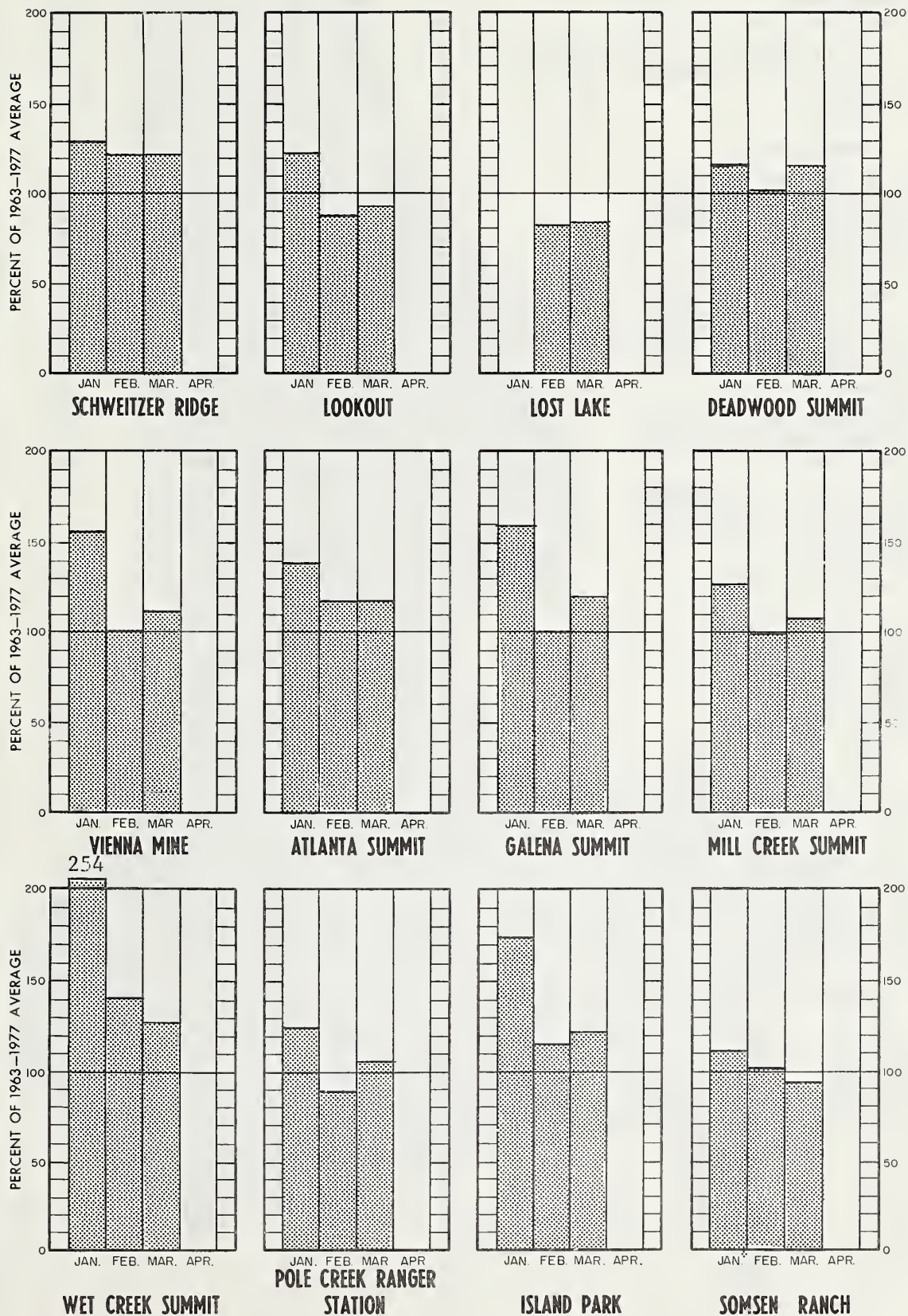
1/ Preliminary analysis and data by the National Weather Service and Meteorological Service of Canada.

2/ Departure from 15-year (1963-1977) drainage division average.

SNOW WATER DEPTHS ACCUMULATION For Selected Snow Courses

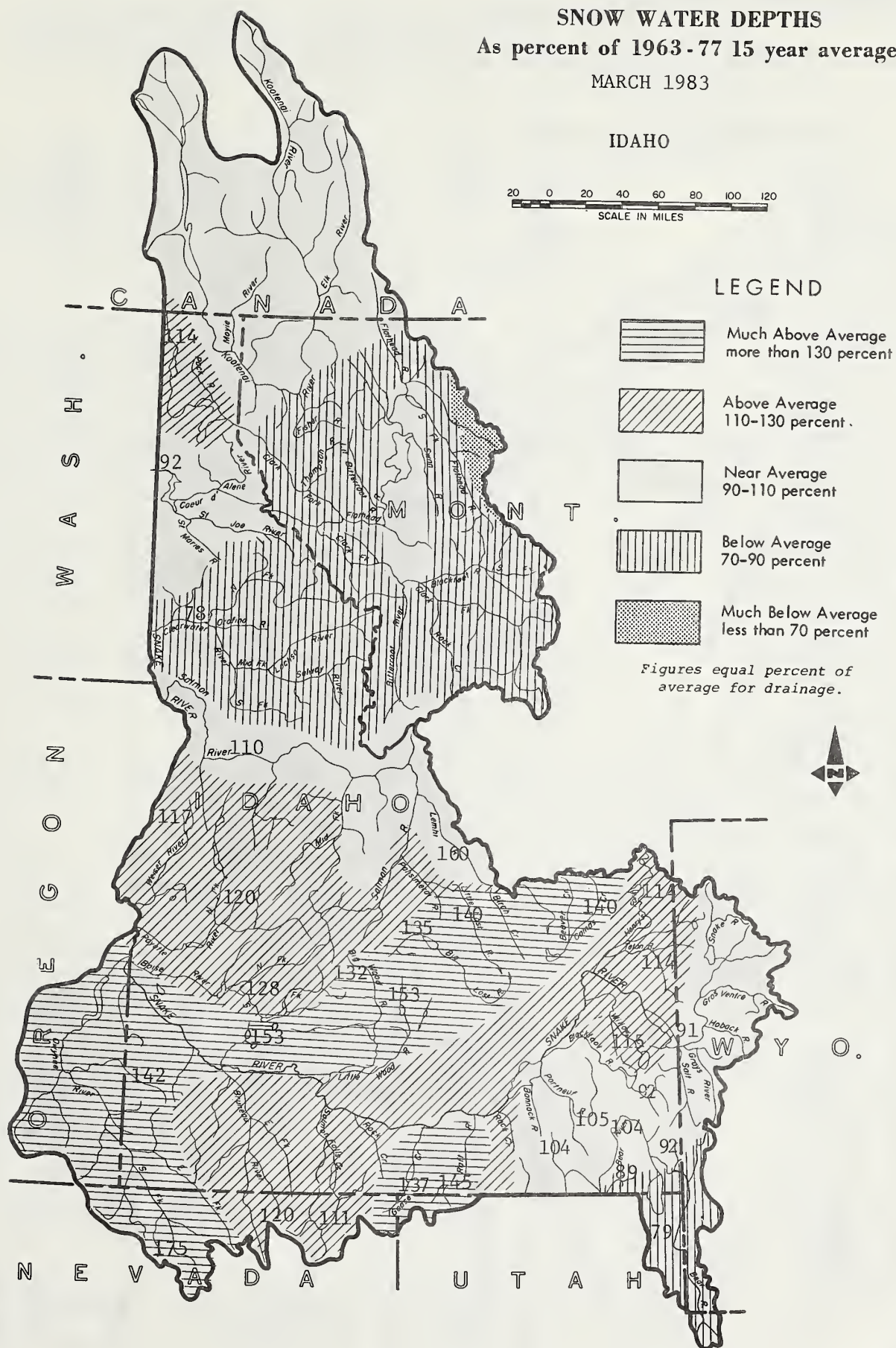
As Compared To 1963 - 1977 15 Year Average

MARCH 1, 1983



COMPARISON of SNOW COVER

RIVER BASIN WATERSHED	NO.OF COURSES AVERAGED	THIS YEARS SNOW WATER EXPRESSED AS PERCENT OF :	
		LAST YEAR	1963-77 AVERAGE
<u>UPPER COLUMBIA RIVER BASIN</u>			
Kootenai River	45	84	89
Pend Oreille River	137	78	83
Clark Fork River	92	74	81
Flathead River	45	84	85
Priest River	6 - 7	104	114
Spokane River	12 - 14	95	92
Hayden Creek	4	80	--
<u>LOWER SNAKE RIVER BASIN</u>			
Palouse River	3	74	80
Clearwater River	15 - 17	75	78
Salmon River	20 - 24	94	110
Lemhi River	6	78	100
<u>MIDDLE SNAKE RIVER BASIN - Northside</u>			
Little Lost River	5	126	140
Big Lost River	8	140	138
Fish Creek	2	159	153
Little Wood River	4	155	153
Big Wood River	11 - 12	107	132
Boise River	17 - 20	105	128
Canyon Creek	3	104	153
Payette River	14 - 17	106	120
Weiser River	2 - 4	110	117
Mann Creek	1	131	--
<u>MIDDLE SNAKE RIVER BASIN - Southside</u>			
Raft River	5 - 7	121	145
Goose-Trapper Creek	3 - 5	114	137
Salmon Falls Creek	10 - 11	90	111
Bruneau River	5	88	120
Owyhee River	6	121	175
Jordan Creek	3	108	142
<u>UPPER SNAKE RIVER BASIN</u>			
Snake Basin - Above Palisades Reservoir	31	73	91
Camas-Beaver Creeks	2	155	140
Henrys Fork River	11	98	114
Teton River	9	85	114
Willow Creek	5 - 9	85	115
Blackfoot River	3 - 7	78	92
Portneuf River	4 - 11	72	105
<u>GREAT BASIN</u>			
Bear River - Upper	4	68	79
Bear River - Lower	21	76	95
Montpelier Creek	6	68	92
Mink Creek	7	81	104
Cub River	3 - 4	84	89
Malad River	4 - 6	97	104



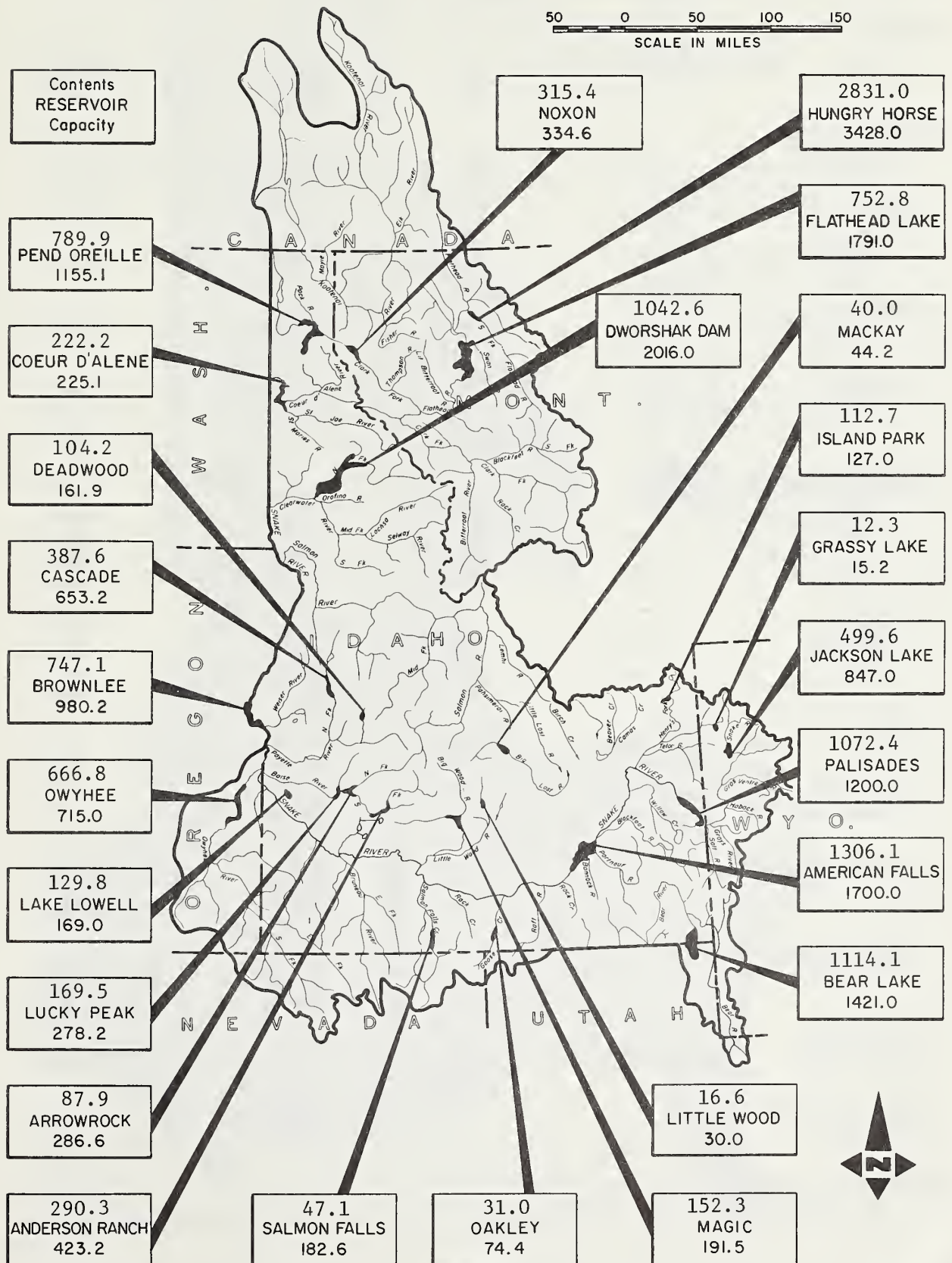
RESERVOIR STORAGE (1,000 Ac. Ft.)

RESERVOIR	USABLE CAPACITY	MEASURED (First of Month)		
		THIS YEAR	LAST YEAR	1963-77 AVERAGE
<u>UPPER COLUMBIA BASIN</u>				
<u>Clark Fork - Pend Oreille</u>				
Hungry Horse	3428.0	2831.0	2327.0	2200.0
Flathead	1791.0	752.8	744.4	994.6
Pend Oreille	1155.1	789.9	805.5	376.0
Noxon	334.6	315.4	310.9	299.1
<u>Spokane</u>				
Coeur d'Alene	225.1	222.2	433.1	121.6
<u>SNAKE BASIN</u>				
<u>Snake</u>				
Jackson Lake	624.4	499.6	517.9	615.6
Palisades	1200.0	1072.4	686.5	903.6
American Falls	1673.0	1306.1	1232.7	1241.9
Island Park	127.0	112.7	106.9	114.6
Grassy Lake	15.2	12.3	12.8	10.6
Brownlee	980.2	747.1	905.4	465.2
<u>Goose-Trapper Creeks</u>				
Oakley	74.4	31.0	29.0	29.3
<u>Salmon Falls Creek</u>				
Salmon Falls	182.6	47.1	23.7	55.5
<u>Big Lost</u>				
Mackay	44.2	40.0	27.5	32.4
<u>Big Wood</u>				
Magic	191.5	152.3	74.0	113.9
<u>Little Wood</u>				
Little Wood	30.0	16.6	16.6	17.8
<u>Fish Creek</u>				
Carey Valley	14.4	9.5	5.7	--
<u>Boise</u>				
Anderson Ranch	423.2	290.3	264.3	256.5
Arrowrock	286.6	87.9	215.0	251.4
Lucky Peak	278.2	169.5	115.2	87.1
Lake Lowell (Deer Flat)	169.0	129.8	107.4	132.6
<u>Owyhee</u>				
Owyhee	715.0	666.8	679.4	491.3
<u>Payette</u>				
Cascade	653.2	387.6	436.3	338.8
Deadwood	161.9	104.2	91.9	85.9
<u>Weiser</u>				
Mann Creek	11.1	8.4	9.4	--
<u>Clearwater</u>				
Dworshak	2016.0	1042.6	865.9	--
<u>GREAT BASIN</u>				
<u>Bear</u>				
Bear Lake	1421.0	1114.1	913.2	1030.6
*Period of Record.				

RESERVOIR STORAGE

USABLE CONTENTS (1,000 Acre Feet)

MARCH 1983



STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT		THIS YEAR		FORECAST PERIOD	PAST RECORD	
		FORECAST ^c			THOUSAND ACRE FEET	
		Thousand Acre Feet	Percent of Average		Last Year	Average [†]
UPPER COLUMBIA BASIN						
KOOTENAI RIVER						
Leonia	(at)	8354	94	Apr-Sep	--	8858
		7260	94	Apr-Jul	--	7708
		5780	94	Apr-Jun	--	6144
PEND OREILLE RIVER						
Clark Fork River						
Whitehorse Rapids	(at)	11100	81	Apr-Sep	--	13781
		10100	81	Apr-Jul	--	12519
		8610	81	Apr-Jun	--	10633
Priest River						
Priest River 1/	(at)	1000	112	Apr-Sep	--	895
		940	112	Apr-Jul	--	841
SPOKANE RIVER						
Post Falls 2/	(at)	2780	96	Apr-Sep	--	2910
		2672	95	Apr-Jul	--	2802
St. Joe River						
Calder	(at)	1210	92	Apr-Sep	--	1309
		1148	93	Apr-Jul	--	1238
SNAKE RIVER BASIN						
SNAKE RIVER - MAIN STEM						
Moran 3/	(at)	850	94	Apr-Sep	--	903
Palisades Inflow 3/		3608	93	Apr-Sep	--	3863
Heise 4/	(nr)	3900	92	Apr-Sep	--	4247
		3245	92	Apr-Jul	--	3527
Blackfoot 5/	(nr)	5380	96	Apr-Sep	--	5612
		4380	96	Apr-Jul	--	4579
Henry's Fork						
Ashton 6/	(nr)	810	110	Apr-Sep	--	737
		608	111	Apr-Jul	--	547
Rexburg 7/	(nr)	1687	110	Apr-Sep	--	1534
		1340	110	Apr-Jul	--	1202
Teton						
South Leigh Creek	(ab)	221	110	Apr-Sep	--	201
		166	111	Apr-Jul	--	150
Portneuf River						
Topaz	(at)	102	94	Mar-Sep	--	108
		83	94	Mar-Jul	--	88
Oakley Reservoir Inflow						
		39.5	127	Apr-Sep	--	31
		36	128	Apr-Jul	--	28
		45	125	Mar-Sep	--	36
		41	127	Mar-Jul	--	33
Salmon Falls Creek						
San Jacinto	(nr)	110	116	Mar-Sep	--	95
		105	117	Mar-Jul	--	90
		99.5	117	Mar-Jun	--	85
Bruneau River						
Hot Springs	(nr)	304	121	Mar-Sep	--	251
		290	122	Mar-Jul	--	238
Little Lost River						
Howe	(nr)	52.5	117	Apr-Sep	--	45
		40	118	Apr-Jul	--	34

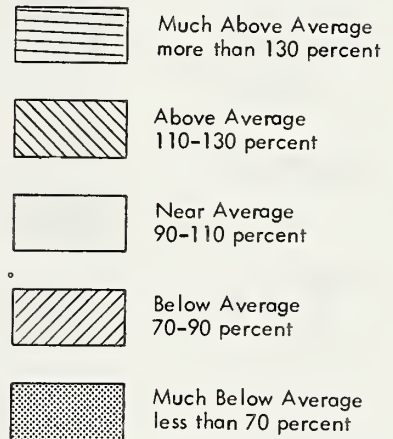
(c) Assuming normal meteorological conditions.

† 1963-1977 period.

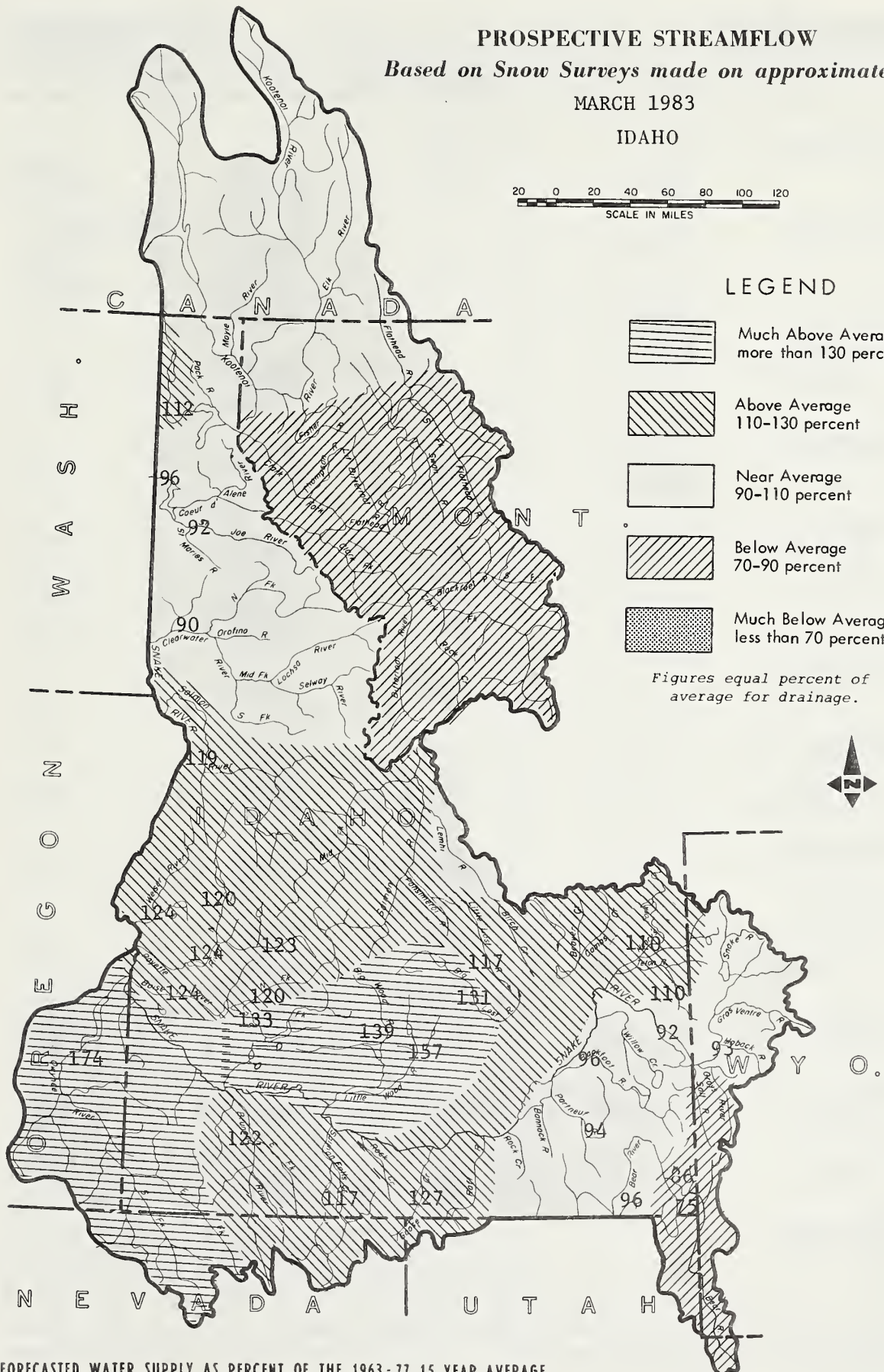
PROSPECTIVE STREAMFLOW
Based on Snow Surveys made on approximately
MARCH 1983
IDAHO

20 0 20 40 60 80 100 120
 SCALE IN MILES

LEGEND



*Figures equal percent of
average for drainage.*



FORECASTED WATER SUPPLY AS PERCENT OF THE 1963-77 15 YEAR AVERAGE

STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT		THIS YEAR		PAST RECORD		
		FORECAST ^c		FORECAST PERIOD	THOUSAND ACRE FEET	
		Thousand Acre Feet	Percent of Average		Last Year	Average [†]
<u>Little Lost River</u> (Continued)						
Wet Creek	(bl)	48	117	Apr-Sep	--	41
		39	118	Apr-Jul	--	33
		31	119	Apr-Jun	--	26
<u>Big Lost River</u>						
Howell Ranch	(at)	295	131	Apr-Sep	--	225
		263	132	Apr-Jul	--	199
		205	133	Apr-Jun	--	154
Mackay 8/	(nr)	268	131	Apr-Sep	--	204
<u>Big Wood River</u>						
Magic Reservoir		443	139	Apr-Sep	--	319
Inflow 9/		429	142	Apr-Jul	--	303
		470	142	Mar-Jul	--	332
<u>Little Wood River</u>						
Carey 10/	(nr)	167	156	Apr-Sep	--	107
		155	157	Apr-Jul	--	99
		137	157	Apr-Jun	--	87
<u>Boise River</u>						
Twin Springs	(nr)	880	120	Apr-Sep	--	733
		812	120	Apr-Jul	--	676
Boise 11/	(nr)	2050	124	Apr-Sep	--	1656
		1900	124	Apr-Jul	--	1536
		1686	124	Apr-Jun	--	1360
<u>South Fork</u>						
Anderson Dam 12/	(at)	823	133	Apr-Sep	--	622
		771	132	Apr-Jul	--	582
<u>Owyhee River</u>						
Gold Cr., Nv 13/	(nr)	30	130	Apr-Jul	--	23
Owyhee, Nv 13/	(nr)	110	137	Apr-Jul	--	80
Lake Owyhee		683	174	Apr-Sep	--	392
net inflow 14/		818	160	Mar-Jul	--	510
<u>Payette River</u>						
Horseshoe Bend 15/	(nr)	2300	124	Apr-Sep	--	1860
		2130	124	Apr-Jul	--	1721
<u>North Fork</u>						
Cascade 16/	(at)	676	120	Apr-Sep	--	564
		634	120	Apr-Jul	--	529
Banks 16/	(nr)	871	121	Apr-Sep	--	726
		831	121	Apr-Jul	--	687
<u>South Fork</u>						
Lowman	(at)	634	123	Apr-Sep	--	516
		563	123	Apr-Jul	--	458
<u>Weiser River</u>						
Weiser	(nr)	513	124	Apr-Sep	--	442
		692	124	Mar-Sep	--	558
<u>Salmon River</u>						
Whitebird	(at)	8530	119	Apr-Sep	--	7196
		7710	119	Apr-Jul	--	6497
<u>Clearwater River</u>						
Spalding	(at)	9750	90	Apr-Sep	--	8672

(c) Assuming normal meteorological conditions.

† 1963-1977 period.

STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR			PAST RECORD	
	FORECAST ^c		FORECAST PERIOD	THOUSAND ACRE FEET	
	Thousand Acre Feet	Percent of Average		Last Year	Average [†]

GREAT BASIN

<u>BEAR RIVER</u>						
Harer	(at)	248	75	Apr-Sep	--	332
<u>Montpelier Creek</u>						
Montpelier	(nr)	12	86	Apr-Sep	--	13.9
<u>Cub River</u>						
Preston	(nr)	48	96	Apr-Sep	--	50
		44	94	Apr-Jul	--	47

1/ Observed flow corrected for storage in Priest Lake.

2/ Observed flow corrected for storage in Coeur d'Alene Lake.

3/ Corrected for storage in Jackson Lake.

4/ Corrected for storage in Jackson Lake and Palisades.

5/ Corrected for storage in Jackson Lake, Palisades, Island Park, Henry's Lake, Grassy Lake and diversions between Heise and Blackfoot.

6/ Corrected for storage in Henrys' Lake and Island Park Reservoir.

7/ Corrected for storage in Henrys' Lake and Island Park, Grassy Lake and diversions between Ashton and Rexburg.

8/ Observed flow corrected for storage in Mackay Reservoir.

9/ Combined flow Big Wood River nr. Bellevue and Camas Creek nr. Blaine.

10/ Corrected for storage in Little Wood Reservoir.

11/ Corrected for storage in Arrowrock, Anderson Ranch and Lucky Peak.

12/ Corrected for storage in Anderson Ranch Reservoir.

13/ Corrected for storage in Wildhorse Reservoir.

14/ From Bureau of Reclamation records of inflow.

15/ Corrected for storage in Cascade and Deadwood Reservoirs.

16/ Corrected for storage in Cascade Reservoir.

Cooperative forecasts released by Soil Conservation Service and National Weather Service.

(c) Assuming normal meteorological conditions.

[†] 1963-1977 period.

SNOW

DRAINAGE BASIN and or SNOW COURSE			THIS YEAR			PAST RECORD	
			Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (inches)	
						Last Year	Average
NAME & DRAINAGE		Elevation					
Above Burke	Coeur d'Alene	4100	2/28	40	15.4	18.1	22.9*
Above Gilmore	Lemhi	8240	3/3	35	7.5	9.8	8.2
Allen Ranch	Blackfoot	6470	2/28	35	9.3	11.5	--
Antelope Ridge	Owyhee	6180	2/24	28	9.0	10.8	6.9*
Aspen Grove	Willow	6500	3/3	51	17.0	16.6	10.7*
Aspen Hall Pass	Lemhi	8200	3/3	35	8.2	11.8	8.5*
Atlanta Summit	Boise	7600	2/28	112	36.9	38.3	31.2*
Atlanta Townsite	Boise	5370	3/3	40	13.0	12.6	--
Austin Bros. Ranch	Blackfoot	6400	2/28	30	8.1	10.0	8.3
Bad Bear	Boise	4940	2/28	43	14.5	15.9	13.5
Badger Gulch	Trapper	6660	3/6	36	16.2	16.6	10.7
Banner Summit	Payette	7040	2/28	92	30.4	27.1	--
Beagle Springs (Mt)	Beaverhead	8850	2/26	31	7.0	--	--
Bear Basin	Little Salmon	5350	2/28	72	22.6	17.0	--
Bear Canyon	Big Lost	7900	3/3	87	22.9	16.8	15.9
Bear Creek (Nv)	Jarbridge	8040	3/6	65	21.8	23.0	18.0*
Bear Mountain	Clark Fork	5400	2/25	140	59.7	61.8	53.7*
Bear Saddle	Mann Creek	6180	3/2	87	32.8	25.0	--
Beaverdam Creek	Portneuf	6120	2/26	29	6.7	11.6	--
Bennett Mountain	Canyon Creek	6560	2/26	62	20.4	19.4	15.0*
Benton Meadow	Priest	2370	2/25	10	2.5	7.4	6.4
Benton Spring	Priest	4920	2/25	53	19.3	15.8	17.7
Big Creek Summit	Salmon	6580	2/24	108	36.7	40.2	31.6
Big Springs	Henrys Fork	6400	2/25	60	19.4	20.2	18.7
Birch Creek	Willow	6800	3/3	27	8.4	13.7	10.7*
Black Bear (Mt)	Madison	7950	2/24	103	39.7	--	--
Black Canyon	Henrys Fork	7960	2/24	91	31.8	36.6	29.9*
Black Moose	Henrys Fork	8160	2/24	106	40.4	40.2	36.1*
Blue Ridge	Blackfoot	6780	3/3	59	21.5	24.3	--
Bogus Basin	Payette	6340	2/28	90	31.0	22.5	20.7
Bogus Basin Road	Boise	5540	2/28	29	9.5	7.6	5.8
Bone	Willow	6200	3/3	26	7.4	8.6	7.4*
Borah (A)	Pahsimeroi	8250	3/3	16	5.1	5.0	--
Bostetter Ranger Sta.	Trapper	7500	3/6	52	21.2	23.8	17.1
Boulder Creek	Weiser	5440	2/28	73	25.0	24.2	21.8
Boy Scout Camp	Raft	7740	3/6	56	23.4	13.9	12.8
Breezy Saddle	Clearwater	5010	3/1	76	23.4	25.1	--
Brockman Station	Willow	6430	3/3	32	10.3	13.6	--
Brundage Mountain	Little Salmon	7560	2/28	107	40.1	51.0	40.6*
Bruno Creek	Squaw Creek	7920	2/28	58	17.7	23.5	--
Camas Creek Divide	Big Wood	5710	2/27	53	18.0	15.3	10.0*
Camp Creek	Beaver	6580	3/1	52	14.0	8.1	9.8
Cayuse Airstrip	Clearwater	3500	3/1	24	6.4	10.5	12.0
Cedar Creek	Cedar	6820	3/4	24	6.1	9.2	9.3
Chilco Ridge	Hayden	3650	2/24	5	1.8	5.6	--
Chimney Creek	Big Wood	6400	2/26	61	21.4	16.9	--
Christensen Ranch	Mink	5560	2/23	32	9.2	9.5	7.9
Clear Creek Meadows	Raft	9420	3/6	84	26.8	23.0	19.1
Cliff Canyon	Malad	7200	2/23	52	19.2	10.0	--
Conie Ridge	Hayden	3900	2/24	10	3.4	6.7	--
Copes Camp	Lemhi	7520	3/3	27	6.4	9.2	6.6
Copper Basin	Big Lost	7640	3/3	54	14.4	7.5	8.4
Copper Ridge	Coeur d'Alene	4820	2/25	61	25.6	25.2	25.1
Corner Creek	Hayden	3150	2/24	13	3.7	1.6	--
Couch Summit	Boise	6840	2/26	72	23.4	18.4	16.9*
Cozy Cove	Deadwood	5380	2/28	60	17.3	14.6	15.2*
Crater Meadows	Clearwater	5960	3/1	97	30.4	39.0	38.9
Crawford Ranger Sta.	Payette	4860	2/26	27	9.6	7.5	7.7
Crooked Fork	Lochsa	3610	3/1	30	9.8	13.5	12.7*
Cub River Ranger Sta.	Cub	5450	2/23	28	8.3	8.4	8.4
Daniels Creek	Malad	6270	2/23	28	7.3	7.1	--
Darby Canyon (Wy)	Teton	8250	3/3	68	22.1	24.2	19.8*
Deadline	Salmon Falls	7400	3/4	59	21.5	21.8	18.8
Deadline South	Salmon Falls	7450	3/4	66	23.8	23.6	--
Deadman Gulch	Boise	5600	2/23	62	20.5	19.2	14.7*
Deadwood Airstrip	Deadwood	5360	2/28	62	17.4	14.1	14.4
Dempsey Creek	Portneuf	6100	2/26	42	11.2	15.1	11.0
Double Springs Pass	Pahsimeroi	8380	3/3	38	9.4	11.9	8.7*
Dry Basin	Mink	7820	2/23	72	24.8	29.5	24.2*
Dry Creek Flat	Malad	6360	2/23	27	8.3	9.3	7.4
Dry Fork	Big Lost	7220	3/7	54	19.4	15.2	14.6*
East Creek	Portneuf	7000	2/26	37	10.1	18.0	--
East Twin	Palouse	4130	2/24	19	6.7	11.8	10.8

(b) 1963-1977, 15 year period. * Estimated 1963-77 15 Year Average.

(A) Aerial observation Water content estimated.

SNOW

DRAINAGE BASIN and or SNOW COURSE			THIS YEAR			PAST RECORD	
			Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (inches)	
						Last Year	Average
NAME & DRAINAGE		Elevation					
Elk Butte	Clearwater	5550	3/1	86	25.0	31.7	34.7
Emigrant Summit	Bear	7390	3/1	70	22.4	29.4	21.7
Emigration Canyon	Bear	6500	3/1	38	10.7	11.4	9.7
Fairview Guard Sta.	Little Lost	6750	3/3	26	7.4	5.7	4.2
Fish Lake Airstrip	Lochsa	5650	3/1	86	25.0	36.3	36.3
Forty-nine Meadows	Clearwater	4830	3/1	71	22.0	23.8	27.2
Fourth of July Summit	Coeur d'Alene	3200	2/28	17	5.4	6.4	8.9
Fox Creek (Nv)	Jarbridge	6750	3/4	36	11.6	12.5	9.7
Franklin Basin	Cub	8040	2/23	56	18.8	26.2	22.7
Freds Mountain (Wy)	Teton	8150	2/28	74	22.4	28.1	16.9*
Galena	Big Wood	7440	2/28	71	20.6	22.6	17.0
Galena (new)	Big Wood	7470	2/28	78	22.4	--	--
Galena Summit	Big Wood	8780	2/28	83	24.8	26.9	20.6
Garfield Ranger Sta.	Little Wood	6560	3/2	59	15.5	8.7	9.8
Garns Mountain	Teton	8300	3/3	95	35.9	--	27.4*
George Creek (Ut)	Raft	8840	3/6	76	23.6	23.7	--
George Peak (Ut)	Raft	9000	3/6	88	32.5	31.8	--
Gibbons Pass (Mt)	Bitterroot	7100	2/28	66	21.3	26.8	21.2
Giveout	Montpelier	6860	3/2	37	9.7	14.9	11.1
Goat Creek (Nv)	Salmon Falls	8880	3/4	58	17.5	21.3	15.7
Graham Guard Sta.	Boise	5690	2/28	54	17.2	17.9	--
Graham Ranch	Big Wood	6270	2/28	61	16.9	13.8	12.8
Grassy Lake (Wy)	Henry's Fork	7265	2/28	96	31.0	39.1	30.6
Hall Creek	Lemhi	7560	3/3	16	4.0	6.6	4.8*
Hemlock Butte	Clearwater	5810	3/1	106	34.6	43.4	43.6*
Hoodoo Basin (Mt)	Clark Fork	6000	2/26	111	40.4	49.9	45.4*
Hoodoo Creek (Mt)	Clark Fork	5900	2/26	105	36.6	47.5	42.0*
Horseshoe Basin	Bear	8000	2/23	66	23.3	27.5	22.0*
Howell Canyon	Marsh Creek	7980	3/6	72	30.4	35.7	22.1
Humboldt Gulch	Coeur d'Alene	4250	2/28	34	12.8	13.6	--
Hummingbird Springs (Nv)	Jarbridge	8870	3/4	76	23.2	27.4	19.5
Idaho City Townsite	Boise	4000	2/28	17	6.1	8.8	--
Indian Grove	Raft	7560	3/6	40	16.5	9.7	--
Indian Meadows	Teton	8240	3/3	111	41.6	44.4	30.9*
Iron Bog	Big Lost	7650	3/7	60	18.8	11.0	12.8*
Iron Mine Creek	Fish Creek	6300	3/1	55	14.7	9.7	9.9
Irving Creek	Medicine Lodge	7035	3/3	30	7.4	3.9	5.2*
Island Park	Henry's Fork	6290	2/25	57	18.3	16.7	15.1
Jackpine Creek	Teton	7350	3/3	68	23.0	23.2	19.6*
Jackson Peak	Boise	7070	2/28	94	33.0	30.8	27.3
Johnson Creek	Blackfoot	6730	2/28	39	10.8	13.1	--
Kellogg Peak (A)	Coeur d'Alene	5560	2/27	66	25.7	27.3	28.2*
Kilgore	Camas Creek	6320	2/28	52	14.6	10.4	10.6
Kit Carson Pasture	Selway	4950	2/24	22	5.2	11.7	--
Lake Fork	Payette	5290	2/25	51	16.3	14.8	14.6
Langford Flat Creek	Salmon Falls	5980	3/4	18	5.0	6.6	--
Latham Springs	Henry's Fork	7630	2/24	87	31.2	34.0	28.6
Lava Creek	Willow	7350	3/3	51	16.9	20.8	--
Leadbelt	Big Lost	6700	3/7	45	14.4	6.4	8.6
Leatherman Pass	Pahsimeroi	9860	3/3	71	23.3	20.3	20.2*
Lemhi Pass (Mt)	Beaverhead	7480	2/26	26	5.2	8.8	8.1
Lemhi Ridge (Mt)	Beaverhead	8100	2/26	31	6.4	10.8	8.9*
Liberty Spring	Mink	8600	2/23	89	32.5	46.9	32.7
Little Beaver	Montpelier	6970	3/2	44	12.4	18.5	14.0
Little Camas Flat	Boise	4940	2/26	27	8.9	10.9	5.9*
Logger Springs	Raft	8120	3/6	57	22.6	15.8	--
Lolo Pass	Lochsa	5240	3/1	59	19.1	31.8	27.5
Lookout	Coeur d'Alene	5140	2/28	80	29.0	30.6	31.0
Lost Garfield	Little Lost	6600	3/3	22	6.0	4.8	3.7
Lost Horse (Mt)	Bitterroot	5940	2/25	68	24.0	--	--
Lost Lake	Clearwater	6110	3/1	132	41.4	49.7	50.0*
Lost-Wood Divide	Big Lost	7900	3/3	88	26.1	23.1	20.4*
Lower Elkhorn	Portneuf	6960	2/23	43	13.2	18.1	12.7*
Lower Home Canyon	Montpelier	7640	3/1	39	10.2	15.5	12.2*
Lower Pebble	Portneuf	5780	2/26	42	11.1	19.5	12.3*
Lower Sands Creek	Coeur d'Alene	3120	2/28	44	17.0	15.2	17.5*
Lucky Dog	Henry's Fork	6860	2/24	76	24.4	27.8	22.1
Magic Mountain	Rock Creek	6880	3/4	52	16.9	22.2	16.4
Mascot Mine	Big Wood	7780	3/5	72	20.0	14.8	13.1
McRenolds Reservoir	Teton	6720	3/3	57	18.6	18.5	17.4*
Meadow Lake	Lemhi	9150	3/3	60	18.0	17.8	16.5
Mill Creek Summit	Salmon	8800	3/3	69	21.9	26.5	20.3
Mink Creek	Portneuf	6410	2/27	59	19.1	24.6	15.5

(b) 1963-1977, 15 year period. * Estimated 1963-77 15 Year Average.

(A) Aerial observation Water content estimated.

SNOW

DRAINAGE BASIN and or SNOW COURSE			THIS YEAR			PAST RECORD	
			Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (Inches)	
						Last Year	Average
NAME & DRAINAGE		Elevation					
Montpelier Creek	Montpelier	6540	3/2	26	7.7	10.0	7.5
Moonshine	Little Lost	7440	3/3	44	11.8	10.1	9.3
Moore's Creek Summit	Boise	6100	2/28	100	35.4	31.5	28.6
Moose Creek	N.F. Salmon	6200	2/25	54	16.8	19.8	15.6
Morgan Creek	Salmon	7600	3/3	47	13.4	14.7	12.8
Moscow Mountain	Palouse	4410	2/24	48	15.6	16.8	15.6
Mosquito Ridge	Coeur d'Alene	5200	2/27	115	40.4	38.3	34.6
Mount Baldy	Big Wood	8920	2/25	75	22.5	23.2	18.4
Mud Creek	Willow	7100	3/3	69	21.5	23.6	--
Mud Flat	Owyhee	5730	2/24	27	7.2	9.0	6.0*
Muldoon	Little Wood	6320	3/2	45	11.8	5.1	7.6
Nez Perce Pass (Mt)	Bitterroot	6570	2/24	38	11.7	19.5	15.7
One Mile Summit	Raft	7330	3/6	24	6.2	4.3	6.1
Oxford Mountain	Malad	6800	2/23	30	8.4	11.6	9.4
Oxford Spring	Malad	6740	2/23	34	9.5	12.8	--
Packsaddle Spring	Teton	8200	3/3	83	29.5	32.7	--
Pebble Creek	Portneuf	6550	2/26	51	14.5	18.5	14.5
Phillips Bench (Wy)	Teton	8200	2/28	81	23.3	34.7	23.2*
Pierce Ranger Sta.	Clearwater	3080	2/24	19	6.0	11.7	10.9
Pine Creek Pass	Teton	6810	2/28	50	14.7	20.0	15.6
Placer Creek	Weiser	5860	3/2	62	20.0	18.8	16.5
Pole Creek Ranger Sta.	Jarbridge	8360	3/4	62	20.0	23.2	18.6
Prairie	Boise	4800	2/27	18	6.1	7.0	5.8
Redfish Lake Flat	Salmon	6560	2/28	47	13.0	13.4	8.9*
Road Creek	Boise	5380	2/28	30	9.6	--	10.4*
Rock Flat Summit	Payette	5310	2/28	67	21.8	16.2	16.7
Roland Summit	St. Joe	5120	2/27	71	31.5	30.0	31.3
Sage Creek Saddle	Hayden	4080	2/24	43	16.1	17.2	--
Savage Pass	Lochsa	6170	3/1	60	19.6	29.0	24.1
Sawmill Canyon	Little Lost	7000	3/3	33	9.8	8.4	6.9
Sawtell Mountain	Henry's Fork	8720	2/25	97	36.6	33.6	28.4*
Schwartz Lake	Lemhi	8540	3/3	40	11.2	15.9	10.8*
Schweitzer Basin	Pend Oreille	6090	3/1	131	49.8	46.9	--
Schweitzer Bowl	Pend Oreille	4800	3/1	90	34.5	31.2	28.1*
Schweitzer Ridge	Pend Oreille	6200	3/1	123	49.0	44.6	40.3*
Secesh Summit	Payette	6520	2/25	101	36.1	41.2	30.9*
Sedgwick Peak	Portneuf	7850	2/26	49	16.2	24.6	--
Seventy-Six Creek	Jarbridge-Bruneau	7100	3/4	45	14.5	17.5	10.4
Shanghai Summit	Clearwater	4570	3/1	58	18.0	23.8	24.1
Sheep Mountain	Willow	6570	3/3	45	14.5	16.0	12.5*
Sherwin	St. Maries	3200	2/23	27	8.4	14.2	13.3
Shoshone Basin	Salmon Falls	5810	3/4	16	5.6	5.9	5.3
Silver City	Jordan-Owyhee	6400	2/26	53	18.4	16.8	13.7
Skitwish Ridge	Coeur d'Alene	5110	2/25	73	30.6	28.5	--
Slug Creek Divide	Blackfoot	7230	3/1	44	12.8	17.3	14.8
Soldier Ranger Sta.	Big Wood	5740	2/26	55	17.8	12.5	11.5
Somsen Ranch	Willow Creek	6840	2/28	44	12.0	16.3	12.7
South Mountain	Jordan-Owyhee	6500	2/26	54	18.9	15.4	11.6
Squaw Flat	Weiser	6240	2/25	81	28.1	22.5	--
Squaw Meadow	Payette	5900	2/25	96	37.9	39.6	31.9
State Line	Teton	6660	2/28	46	13.2	14.4	12.7
Stickney Mill	Big Lost	7430	3/3	49	11.8	7.6	8.3
Strawberry Creek	Mink	5820	3/1	33	11.5	10.9	9.6
Strawberry Mink Divide	Mink	6720	2/23	56	18.4	21.0	18.7
Sublett	Raft	5950	3/6	33	14.6	14.0	10.1
Sulphur Peak	Blackfoot	7070	2/28	43	12.8	15.3	--
Sunset (A)	Coeur d'Alene	5540	2/27	101	35.5	39.1	32.6*
Swede Peak	Little Wood	7640	3/2	86	23.7	17.2	15.2
Targhee Pass	Henry's Fork	6980	2/25	47	14.4	10.7	13.6*
Telfer Ranch	Fish Creek	5840	3/1	43	12.3	7.3	7.8
Teton Pass W.S. (Wy)	Teton	7740	3/2	79	23.7	29.6	21.0*
Tex Creek	Willow	6650	3/3	33	10.1	11.5	8.5*
Trail Creek (Mt)	Beaverhead	7090	2/26	25	4.3	--	--
Trinity Mountain	Boise	7770	3/3	129	45.6	45.3	38.2
Tripod Summit	Payette	5260	2/26	67	22.1	18.7	16.7
Twelve Mile Creek (Mt)	Bitterroot	5600	2/25	49	16.8	--	--
Twin Peaks	Salmon	9190	3/3	69	21.6	23.6	23.0*
Twin Lakes (Mt)	Bitterroot	6510	2/25	82	29.6	--	--
Twitchell Canyon	Blackfoot	6300	3/1	51	15.0	15.8	--
Upper Elkhorn	Portneuf	7140	2/23	54	17.8	20.3	16.4*
Upper Home Canyon	Montpelier	8560	3/2	63	19.1	28.1	19.9
Valley View	Henry's Fork	6680	2/25	48	16.0	14.6	15.6
Vi Pont	Goose	7670	3/6	47	18.4	17.3	12.9*

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SNOW

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			Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (inches)	
NAME & DRAINAGE		Elevation				Last Year	Average
Vienna Mine	Salmon	8960	3/3	111	36.0	42.7	32.1
Webber Creek	Medicine Lodge	6700	3/3	23	5.6	4.4	--
West Branch	Weiser	5560	2/28	80	26.4	25.0	--
West Twin	Palouse	4220	2/24	16	6.2	9.8	9.4
Wet Creek Summit	Little Lost	7680	2/27	42	13.7	9.7	10.7
Whiskey Flat	Montpelier	6960	3/2	32	8.6	12.6	8.5
White Elephant	Henry's Fork	7710	2/25	69	23.6	25.3	18.4*
Wildhorse Divide	Portneuf	6490	2/27	58	19.8	23.2	--
Williams Creek Summit	Salmon	7990	3/2	35	9.8	11.6	11.1
Willow Flat	Cub	6070	2/23	42	12.9	14.9	13.9
Wilson Creek (Nv)	Salmon Falls	7500	3/4	43	14.0	13.0	11.0
Wood Canyon Divide	Blackfoot	7450	2/28	46	14.3	19.7	--
Worm Creek	Cub	6620	2/23	49	16.0	16.9	--

(b) 1963-1977, 15 year period. * Estimated 1963-77 15 Year Average.
 (A) Aerial observation Water content estimated.

SNOTEL^{1/}

Data Site Name	Drainage	Date	Pillow Snow Water Equivalent (inches)	Precipitation Water Year (Accumulative) (inches)
Atlanta Summit	Boise	3/1	30.8	37.0
Banner Summit	Payette	3/1	27.9	31.4
Bear Basin	Little Salmon	3/1	23.8	27.2
Bear Canyon	Big Lost	3/1	19.2	24.6
Bear Mountain	Clark Fork	3/1	Not Available	65.4
Bear Saddle	Mann Creek	3/1	32.5	29.2
Bennett Mountain	Canyon Creek	3/1	24.4	23.3
Big Creek Summit	Salmon	3/1	34.8	25.7
Bostetter Ranger Sta.	Trapper	3/1	27.1	11.6
Cozy Cove	Deadwood	3/1	23.6	26.6
Crab Creek	Camas-Beaver	3/1	22.1	20.8
Deadwood Summit	Deadwood	3/1	52.4	47.2
Dollarhide Summit	Big Wood	3/1	28.1	30.8
Elk Butte	Clearwater	3/1	33.5	36.4
Emigrant Summit	Bear	3/1	25.5	22.9
Franklin Basin	Cub	3/1	20.9	22.3
Galena	Big Wood	3/1	20.4	20.7
Galena Summit	Big Wood	3/1	20.3	23.0
Garfield Ranger Sta.	Little Wood	3/1	16.2	17.5
Giveout	Montpelier	3/1	10.4	9.1
Graham Guard Sta.	Boise	3/1	20.4	24.1
Hilts Creek	Little Lost	3/1	15.2	14.7
Howell Canyon	Marsh Creek	3/1	23.2	25.5
Humboldt Gulch	Coeur d'Alene	3/1	11.5	33.5
Hyndman	Big Wood	3/1	16.3	18.1
Island Park	Henry's Fork	3/1	17.9	20.9
Jackson Peak	Boise	3/1	31.7	34.9
Lolo Pass	Lochsa	3/1	20.8	28.5
Lookout	Coeur d'Alene	3/1	28.9	35.5
Lost Lake	Clearwater	3/1	51.9	49.4
Lost-Wood Divide	Big Lost	3/1	24.4	31.2
Magic Mountain	Rock Creek	3/1	19.5	19.8
Meadow Lake	Lemhi	3/1	17.1	16.2
Mill Creek Summit	Salmon	3/1	18.7	19.3
Moonshine	Little Lost	3/1	11.7	13.2
Moores Creek Summit	Boise	3/1	38.0	35.2
Moose Creek	North Fork Salmon	3/1	17.1	17.9
Morgan Creek	Salmon	3/1	13.8	14.9
Mosquito Ridge	Coeur d'Alene	3/1	37.7	41.1
Mountain Meadows	Selway	3/1	13.3	17.9
Mud Flat	Owyhee	3/1	Not Available	Not Available
Oxford Spring	Malad	3/1	10.7	16.0
Prairie	Boise	3/1	Not Available	14.9
Savage Pass	Lochsa	3/1	20.7	23.6
Schweitzer Basin	Pend Oreille	3/1	59.3	35.9
Secesh Summit	Payette	3/1	39.3	37.5
Shanghai Summit	Clearwater	3/1	23.1	31.6
Sheep Mountain	Willow	3/1	Not Available	15.6
Sherwin	St. Maries	3/1	8.4	26.0
Slug Creek Divide	Blackfoot	3/1	14.7	16.0
Somsen Ranch	Willow Creek	3/1	11.5	13.2
South Mountain	Jordan-Owyhee	3/1	26.9	22.8
Squaw Flat	Weiser	3/1	27.6	32.0
Stickney Mill	Big Lost	3/1	10.5	11.3
Sunset	Coeur d'Alene	3/1	30.8	27.8
Swede Peak	Little Wood	3/1	20.6	22.3
Trinity Mountain	Boise	3/1	41.3	43.5
Vienna Mine	Salmon	3/1	35.9	35.1
West Branch	Weiser	3/1	28.4	32.0
White Elephant	Henry's Fork	3/1	27.7	31.2
Wildhorse Divide	Portneuf	3/1	11.3	15.5

^{1/}Data readings as reported by automated Snotel system.

GOVERNMENT AGENCIES

States:

Idaho Department of Water Resources
State of Idaho Department of Fish and Game
University of Idaho
Idaho State University
Montana Agricultural Experiment Station
Montana State Water Conservation Board
Montana Cooperative Snow Surveys
Nevada Cooperative Snow Surveys
Oregon Agricultural Experiment Station
Oregon Cooperative Snow Surveys
Oregon State Engineer and Corps of
State Watermasters
Utah Cooperative Snow Surveys
Wyoming Cooperative Snow Surveys

Federal:

U. S. Army Engineers

U. S. Department of Agriculture
Forest Service
ESCS Crop Reporting Service
SEA Agricultural Research

U. S. Department of Commerce
NOAA, National Weather Service

U. S. Department of the Interior
Bonneville Power Administration
Water and Power Resources Service
Fish and Wildlife Service
Water Resources Division, Geological Survey
National Park Service
Bureau of Land Management

PUBLIC UTILITIES

Washington Water Power Company
Idaho Power Company

ORGANIZED PUBLIC AGENCIES

Big Lost River Irrigation District
Blaine Soil Conservation District
Boise Project Board of Control
Idaho Water District #01
Little Wood River Irrigation District
Mann Creek Irrigation District
Salmon Falls Creek Irrigation Company
Twin Falls Soil Conservation District
Big Wood Irrigation Company
Owyhee Project - North & South Board of Control
Valley Soil Conservation District
Portneuf Soil and Water Conservation District
East Cassia Soil and Water Conservation District
West Cassia Soil and Water Conservation District
Camas Soil and Water Conservation District

Other organizations and individuals furnish valuable information for snow survey reports. Their cooperation is gratefully acknowledged.

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SOIL CONSERVATION SERVICE

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